



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,324	07/03/2003	Henry M. Hund JR.	0554300/2006	4056

7590 07/29/2004

David J. Hill  
Chambliss, Bahner & Stophel, P.C.  
1000 Tallan Building  
Two Union Square  
Chattanooga, TN 37402

EXAMINER
----------

FOX, CHARLES A

ART UNIT	PAPER NUMBER
----------	--------------

3652

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/612,324

**Applicant(s)**

HUND ET AL.

**Examiner**

Charles A. Fox

**Art Unit**

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24 is/are rejected.
- 7) ☒ Claim(s) 25-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20030703</u> . | 6) <input type="checkbox"/> Other: ____  |

***Information Disclosure Statement***

U.S. patent 5,726,726 was lined through and not considered because it has no relevance to a vehicle.

***Claim Objections***

Claim 25 and 26 are objected to because of the following informalities:

Claim 25 has two subheadings designated (b), the second (b) should be changed to (c) and appropriate changes made to the subheadings that follow;

Claim 26 has subheadings that start with the letter (e), this appears to be a reference to the preceding claim. A more proper way of referring to the further limitations would be --(a) said reach cylinder having:--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breckenridge in view of Riedl et al. Breckenridge US 4,401,407 teaches an apparatus for acquiring, lifting and emptying a container into the collection bin of a refuse vehicle, comprising:

a frame;

a collection bin (20) mounted on said frame;

Art Unit: 3652

an apparatus for acquiring, lifting and emptying a container into said collection bin. Brekenridge does not teach a rear collection compartment with a packer blade.

Riedl et al. US 3,204,789 teaches a refuse collection vehicle comprising:

a frame;

a collection bin mounted on said frame (via door 18);

a collection compartment (3) that is pivotally mounted to the rear of said vehicle;

a storage compartment mounted on said frame between the collection bin and the collection compartment;

a packer blade (12) within the collection compartment;

means for moving the packer blade within the collection compartment so as to move refuse into the storage compartment. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the vehicle taught by Brekenridge with a rear collection compartment as taught by Riedl et al. in order to allow the operator to load the truck from either the rear or the side without resorting to heavy lifting

Claims 19,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breckenridge in view of Riedl et al. as applied to claim 18 above, and further in view of Armstrong. Breckenridge in view of Riedl et al. teach the limitations of claim 18 as above Breckenridge further teaches:

a container grab assembly (32) which includes a pair of opposed grabbing arms in a spaced relationship that are operable by a fluid operated actuating system (110) to grab and release a container;

Art Unit: 3652

an articulated arm (30) that is operable by a fluid operated actuator (36) through a cycle that includes retracted, extended, lifting and dumping positions.

Breckenridge does not teach the lifting arm as having multiple articulated joints.

Armstrong US 3,952,890 teaches an articulated lifting arm comprising :

- a base link (1);

- an upper link (20) having a first and second end;

- a reach link (7) having a first end pivotally attached to the base link, and a second end pivotally attached to the upper link;

- a lift arm (5) having a first and second end, one of said end connected to a lifting device (3);

- a system of hydraulic actuators (9,11,14) for movement of the articulated structure;

wherein during movement of said arm the base link and the upper link remain substantially parallel with each other;

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the apparatus taught by Breckenridge in view of Riedl et al. with an articulated arm as taught by Armstrong in order to allow the device to pick up containers at close distances from the vehicle thereby allowing the vehicle to operate in areas with restricted spaces such as alleyways.

In regards to claim 21 Breckenridge and Armstrong both further teach using double acting hydraulic actuators to move their lifting arms.

Art Unit: 3652

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breckenridge, Riedl et al. and Armstrong as applied to claim 19 above, and further in view of Pickrell. In regards to claims 22 and 23 Breckenridge, Riedl et al. and Armstrong teach the limitations of claim 19 as above they do not teach a gear assembly being used on the gripping device. Pickrell US 5,026,104 teaches a gripping assembly for lifting a container for emptying, said gripper comprising:

- a side support arm (29), having a first and second end where said first end is attached to a lift arm;

- a gear box that is mounted on said second end of said support arm, said gear box including a left gear (38) and a right gear (35);

- a right shaft (33) on which right gear is mounted;

- a left shaft (34) on which left gear is mounted;

- a drive link (40) with a first and a second end, where said first end is mounted on said right shaft;

- a left grabbing arm (52) mounted on said left shaft;

- a right grabbing arm mounted on said right shaft;

- a grabber cylinder (43) having a base end and a rod end, one of said ends being mounted on the side support arm and the other being attached to said second end of said drive link;

wherein said relationship between said gears, drive link and grabber cylinder are such that retraction of the cylinder rod will move the grabbing arms from an open position to a grab position.

Art Unit: 3652

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the apparatus taught by Breckenridge, Riedl et al. and Armstrong with a grabber as taught by Pickrell in order to be able to pick up containers of various sizes and shapes without having to adjust the gripping mechanism to suit the container being picked up.

In regards to claim 24 it would have been obvious to one of ordinary skill in the art, at the time of invention to enclose the gear mechanism of Breckenridge as modified by Pickrell as it is a well known expedient to place gears in a closed box with extending shafts to protect the gears from the elements as well as providing a means to easily lubricate the them.

Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore et al. in view of Riedl et al. Moore et al. US 5,861,580 teach a refuse collection vehicle comprising:

- a frame;

- a collection bin (14) mounted on said frame;

- an apparatus (16) for emptying a container into said bin;

- a storage compartment mounted adjacent to said collection bin;

- wherein said apparatus for emptying containers comprises;

- a pair of lifting arms (20) with a first end pivotally connected to said frame
  - and a fork (10) pivotally attached to a second end of said arms;

- said fork being adapted to engage sleeves (32) of a container (30) for lifting thereof;

a first fluid-operated actuator (26) for pivoting said fork, and a second fluid-operated actuator (18) for pivoting said arm about its first end. Moore et al. do not teach a rear collection compartment with a packer blade.

Riedl et al. US 3,204,789 teaches a refuse collection vehicle comprising:

- a frame;
- a collection bin mounted on said frame (via door 18);
- a collection compartment (3) that is pivotally mounted to the rear of said vehicle;
- a storage compartment mounted on said frame between the collection bin and the collection compartment;

- a packer blade (12) within the collection compartment;

means for moving the packer blade within the collection compartment so as to move refuse into the storage compartment. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the vehicle taught by Moore et al. with the collection compartment taught by Riedl et al. in order to allow the vehicle to load the content of both heavy refuse containers and residential type containers into said vehicle, thereby increasing the usefulness of said vehicle.

#### ***Allowable Subject Matter***

Claims 25-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and addressing the objections as discussed above. Claim 25 has structural limitations dealing with the placement of the lift and reach cylinders that are not taught or suggested in the prior art of Armstrong. Claims 26-



Art Unit: 3652

30 which depend from claim 25 will also be in condition for allowance once claim 25 is rewritten as described above and the objectionable subject matter of claim 26 is rectified.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 703-605-4294. The examiner can normally be reached between 7:00-5:00 Monday-Thursday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAF

CAF

7-18-04

  
EILEEN D. LILLIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600